

# APPLICATION BRIEF

## 2020

## RECLOSER CONTROL TEST SYSTEM

### Brief Description:

Emerging Technologies, LLC. was called upon to build an automated recloser control test system based on an existing customer design. The new system was required to add capacity along with existing systems.

The new system has the ability to test multiple variations of product based on installed options. The system interfaces the smart DUT via serial communication as well as discrete and analog I/O to verify the features of the DUT.

Additionally, the test software interfaced numerous power supplies and instruments via GPIB & Ethernet interface to perform testing.

The new system tests functionality of the DUT based on ordered options and stores test results. Operator selectable automated or manual testing can be performed. Test reports can be generated and printed.

An existing, system design was provided by the customer for re-application for the new system. New components were provided by Emerging Technologies to replace obsolete equipment to complete the system.

The design package included bill of material, mechanical diagrams, electrical diagrams, and upgraded custom developed LabVIEW 2018 application software.

System verification was performed at Emerging Technologies and on-site commissioning was provided at the plant.

### Customer Benefit:

The customer is able to perform testing on built to order products in a timely manner prior to shipment to the end user. Test reports are provided to the end user and results are stored.



### ET Responsibilities:

- Functional Specification Generation
- ✓ Design / Engineering
- ✓ Fabrication
- ✓ Programming – Software
- Programming – Firmware
- Circuit & PCB Design
- ✓ On-Site Commissioning
- ✓ Post Commissioning Support
- Other

### Technologies:

- Embedded Computers
- Microcontrollers
- ✓ Visual Software
- ✓ Control Software
- ✓ Data Acquisition
- ✓ Computer Based Control
- ✓ Communications – GPIB, Ethernet, & Serial
- System Integration
- ✓ Other -Modbus

### Special Features:

- ✓ Modular Cable Interface to DUT.
- ✓ Hand-held Barcode Scanner.
- ✓ Manual Testing Capability for Troubleshooting.
- ✓ Rack-mounted Industrial PC, Power Supplies, and Instruments.
- ✓ Air Conditioned Instrument Rack.
- ✓ Rolling Chassis for Mobility.